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10/701,695	11/05/2003	Larry H. McAmish	2098-123A	7084
24256	7590	10/04/2007	EXAMINER	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/701,695	Applicant(s) MCAMISH ET AL.	
	Examiner Nancy Bitar	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/26/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 07/09/2007 have been fully considered but they are not persuasive.
2. Applicant did not address the objection for claim 2 therefore, the objection are not been withdrawn.
3. In response to applicant's arguments, the recitation "analyzing pore structure in a microporous polyolefin" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Moreover, Topolkaraev et al. teaches analyzing a porous film can desirably include a polymer material having a morphology composed of distinctively interconnecting pores, column 3, line 42-45 and in figure 1 teaches a scanning electron photomicrograph and Ling et al teaches more specifically the focusing of the confocal microscope at a depth within the a film. Therefore, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is

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some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Ling et al. teaches the confocal scanning laser microscopy of polymer coating where a CSLM images can be obtained with corresponding depths without the interference of the above coating layer, page 153, figure 2) Because the confocal scanning laser microscopy helps in providing a better stereoscopic expression of the concerned surfaces. It would have been obvious to one of ordinary skill in the art to the confocal microscope in Topolkaraev et al. in order to provide simultaneous qualitative and quantitative information on coating surfaces as well as measurements over a wide range of surface areas.

4. Applicant argues that "the Examiner cannot pick and choose among individual elements of assorted prior art references to recreate a claimed invention; rather the Examiner has the burden to show some teaching or suggestion in the references to support their use in the particular claim combination " The Examiner did not pick and choose .She have made a prema facia obviousness based on two references that they are from the same field of endeavor and there is a motivation to combine the references recited in the reference. However, examiner recognizes the requirements above, and clearly presents the evidence as set forth in the rejection.

***Claim Objections***

5. Claim 2 is objected to because of the following informalities: the word "at" is duplicated in line 2. Appropriate correction is required.

***Claim Rejections - 35 U.S.C. § 103***

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Topolkaraev et al. (US 5,968,643), and in view of Ling et al (Confocal scanning laser microscopy of polymer coating, 26 May 1997)

As to claim 1, Topolkaraev et al. teaches a method of analyzing pore structure in a microporous polyolefin film (a porous film 20, figure 1), comprising applying a detectable material to one surface of a microporous polyolefin film

wherein the detectable material is capable of traveling through pores in the film (the film can desirably include a polymer material having a morphology composed of distinctively interconnecting pores, column 3, line 42-45);

and focusing a confocal microscope at a depth within the film (scanning electron microscopy and image analysis, column 17, lines 20) to obtain a first image of the

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detectable material within pores of the film at the depth within the film (the film microscopy, such as by using a JSM 6400(JEOL, Peabody, Mass.) scanning electron microscope with both secondary and backscatter electron detectors, column 17, lines 40-44).

While Topolkaraev et al. teaches meets a number of the limitations of the claimed invention, as pointed out more fully above, Topolkaraev et al fails to specifically teach "focusing a confocal microscope at a depth within the film". Specifically, Ling et al. teaches the confocal scanning laser microscopy of polymer coating where a CSLM images can be obtained with corresponding depths without the interference of the above coating layer, page 153, figure2) Because the confocal scanning laser microscopy helps in providing a better stereoscopic expression of the concerned surfaces. It would have been obvious to one of ordinary skill in the art to the confocal microscope in Topolkaraev et al. in order to provide simultaneous qualitative and quantitative information on coating surfaces as well as measurements over a wide range of surface areas. Therefore, the claimed invention would have been obvious to one of ordinary skill in the art at the time of the invention by applicant.

As to claim 2, Ling et al. teaches the method according to claim 1, further comprising focusing the confocal microscope at least one additional depth within the film to obtain at least one additional image of the detectable material within pores of the film at the at least one additional depth (figure 4(b) shows two peaks at depth 6.1 and 13.3microns measured from a reference point which correspond to the top points of the coating and substrate respectively, Ling et al, page 155)

As to claim 3, Ling et al. teaches the method according to claim 2, further comprising focusing the confocal microscope at the one surface to obtain a first surface image (figure 1 (d) the complete surface image from the entire image set, page 152).

As to claim 4, Ling et al. teaches the method according to claim 3, wherein an additional detectable material, which is not capable of traveling through pores in the film, is applied to the one surface prior to focusing of the confocal microscope on the one surface (because the poly (2-vinylpyridine) coating is not completely opaque, the laser beam can penetrate the entire coating and focus on the surface of the steel surface, page 153).

As to claim 5, Topolkaraev et al. teaches the method according to claim 4, wherein the additional detectable material comprises detectable particles of a size, which prevents their travel through pores in the film (A major factor which can affect the access of liquid into the microporous film structure can include the specific permeability of the film material, as determined by the pore geometry (pore size and size distribution) and by the connectivity and tortuosity of the three-dimensional pore structure, column 4, lines 14-19).

As to claim 6, Ling et al. teaches the method according to claim 3, further comprising focusing the confocal microscope at the other surface of the film to obtain a second surface image of the detectable material at the other surface (note that a series of surface intensity images are taken throughout this scanning process, and the number of images (different surfaces) taken and the depth over which the laser beam is

focused are predetermined and set according to the roughness and thickness of the coating, page 153, image processing and analysis)

As to claim 7, Ling et al. teaches the method according to claim 2, further comprising focusing the confocal microscope at the other surface of the film to obtain a surface image of the detectable material at the other surface (figure 1(b)).

As to claim 8, Ling et al. teaches the method according to claim 1, further comprising focusing the confocal microscope at a plurality of additional depths within the film to obtain a plurality of additional images (single images from the beginning, the middle, and the end of the entire image set, figures 1(a)-(c), page 152) of the detectable material within pores of the film at the plurality of additional depths (maximum intensity images and their corresponding depth, page 153).

As to claim 9, Ling et al. teaches the method according to claim 8, further comprising aligning the first image and the plurality of images to create a three dimensional image of pore structure through the film (figure 3, 3D reconstructed images, page 153)

As to claim 10, Ling et al. teaches the method according to claim 1, wherein the detectable material is a fluorescent dye (fluorescence have been applied occasionally for evaluating polymer coatings, page 149).

As to claim 11, Topolkaraev et al. teaches the method according to claim 1, wherein the polyolefin comprises polyethylene (the source material may include homopolymers of polyethylene or polypropylene, column 4, lines 39-41)

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As to claim 12, Topolkaraev et al. teaches the method according to claim 11, wherein the polyethylene comprises a filler (the source material for the film 20 can also include a further supplemental material, and the supplemental material may include a filler material, column 5, lines 43-45).

As to claim 13, Topolkaraev et al. teaches the method according to claim 12, wherein the filler comprises calcium carbonate (suitable filler material can include supermite, an ultrafine ground  $\text{CaCO}_3$ , column 6, lines 63-68).

The limitations of claims 14-16 has been addresses above except for the following:

each confocal microscope image comprises a two dimensional image of pore structure at a depth within the film and is represented by a detectable dye. Topolkaraev et al. teaches that limitation in column 14, lines 41-62)

As to claim 17, Topolkaraev et al. teaches the three dimensional image according to claim 15, wherein the polyolefin comprises polyethylene (the source material may include homopolymers of polyethylene or polypropylene, column 4, lines 39-41)

As to claim 18, Topolkaraev et al. teaches the three-dimensional image according to claim 17, wherein the polyethylene comprises filler (the source material for the film 20 can also include a further supplemental material, and the supplemental material may include a filler material, column 5, lines 43-45).

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As to claim 19, Topolkaraev et al teaches the three-dimensional image according to claim 18, wherein the filler comprises calcium carbonate (suitable filler material can include supermite, an ultrafine ground  $\text{CaCO}_3$ , column 6, lines 63-68).

Claim 20 differ from claim 14 only in that claim 20 is a system claim whereas; claim 14 is a method claim. Thus, claim 20 is analyzed as previously discussed with respect to claim 14 above.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nancy Bitar whose telephone number is 571-270-1041. The examiner can normally be reached on Mon-Fri (7:30a.m. to 5:00pm).

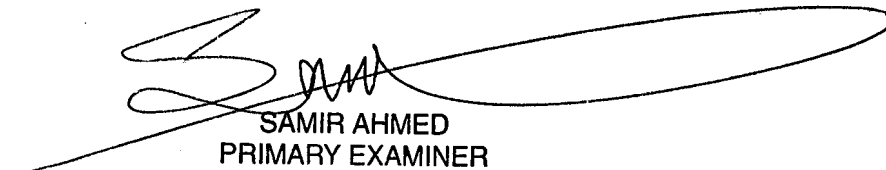
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on 571-272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nancy Bitar

9/25/2007



SAMIR AHMED  
PRIMARY EXAMINER